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Claims

What is claimed is:

1. A material eject system for ejecting material from a bed of a vehicle transporting the material, the material eject system comprising:
 - an ejector operatively associated with the bed of the vehicle and movable between a forward end of the bed and a rear end of the bed;
 - a motor mechanically connected to the ejector for moving the ejector through an ejector stroke to dispense material from the bed, the motor, in response to a constant input, operating at a first speed during a first portion of the ejector stroke and operating at a second speed during a second portion of the ejector stroke; and
 - a speed control operatively connected to the motor and automatically changing the input to the motor to operate the motor at the first speed during the second portion of the ejector stroke.
2. A material eject system for ejecting material from a bed of a vehicle transporting the material, the material eject system comprising:
 - an ejector operatively associated with the bed of the vehicle and movable between a forward end of the bed and a rear end of the bed;
 - a motor mechanically connected to the ejector for moving the ejector through an ejector stroke to dispense material from the bed, the motor in response to a fixed input operating at a first speed during a first portion of the ejector stroke and operating at a second speed during a second portion of the ejector stroke;
 - a sensor for sensing the motor moving the ejector from the first portion to the second portion of the eject cycle;

a speed control operatively connected to the sensor and the motor and changing the input to the motor in response to the sensor detecting the motor moving the ejector from the first portion to the second portion of the eject cycle to operate the motor at the first speed in the second portion of the eject cycle.

3. A material eject system of claim 2 wherein the motor is a fluid motor and the method further comprises supplying fluid at a first flow rate to the fluid motor to operate the motor at the first speed during the first portion of the eject cycle.

4. A material eject system of claim 3 wherein a valve is in fluid communication with the fluid motor and the method further comprises actuating the valve to supply fluid at a first flow rate to the fluid motor to operate the motor at the first speed during the first portion of the eject cycle.

5. A method of controlling an operation of a motor mechanically connected to an ejector operatively associated with a bed of a vehicle, the bed containing material being transported by the vehicle, the method comprising:

providing a first input to the motor;

operating the motor in response to the first input at a first speed during a first portion of an ejector stroke of the ejector, the motor operating at a second speed during a second portion of the ejector stroke in response to the first input;

providing a second input to the motor different from the first input; and

operating the motor in response to the second input at the first speed during the second portion of the ejector stroke of the ejector.

6. method of claim 5 further comprising detecting when the motor begins moving the ejector through the second portion of the ejector stroke.

7. method of claim 6 further comprising providing the second input to the motor in response to detecting when the motor begins moving the ejector through the second portion of the ejector stroke.

8. method of claim 6 wherein the motor is a fluid motor and the method further comprises supplying a first flow rate of fluid to the fluid motor to operate the motor at the first speed during the first portion of the ejector stroke and the motor will operate at a second speed in response to the first flow rate during the second portion of the eject stroke.

9. A method of claim 8 wherein a valve is in fluid communication with the fluid motor and the method further comprises actuating the valve to supply the fluid at the first flow rate to the of fluid motor.

10. A method of claim 9 further comprising detecting when the motor begins moving the ejector in the second portion of the eject stroke.

11. A method of claim 10 further comprising actuating the valve to supply the fluid to the fluid motor at a second flow rate in response to detecting when the motor begins moving the ejector in the second portion of the eject stroke so that the motor moves at the first speed during the second portion of the eject stroke.

12. A method of claim 11 further comprising supplying command signals to the valve to operate the valve and cause the first flow rate of fluid to be supplied to the fluid motor during the first portion of the eject stroke and the second flow rate of fluid to be supplied to the fluid motor during the second portion of the eject stroke.

13. A method of controlling an operation of a motor mechanically connected to an ejector operatively mounted on a bed of a vehicle, the bed containing material being transported by the vehicle, the method comprising:

moving the vehicle at a vehicle speed; and

simultaneously moving the ejector through an eject stroke at one of a plurality of selectable ejector speeds to eject the material from the bed of the moving vehicle and deposit the material in a layer.

14. A method of claim 13 further comprising selecting one of the plurality of selectable ejector speeds to move the ejector through the ejector stroke at a speed to deposit the material in a layer having a desired thickness.

15. A cylinder control system, comprising:
a fluid source;
a fluid cylinder operatively connected to the fluid source, wherein the fluid cylinder, in response to a constant fluid input from the fluid source, operates at a first speed during a first portion of an extension stroke and operates at a second speed during a second portion of the extension stroke; and
a speed control operatively connected to the cylinder and automatically changing the fluid input to the cylinder to operate the cylinder at the first speed during the second portion of the extension stroke.

16. A method of controlling operation of a fluid cylinder, comprising:
providing a first fluid input to the cylinder;
operating the cylinder in response to the first fluid input at a first speed during a first portion of an extension stroke, the cylinder operating at a second speed during a second portion of the extension stroke in response to the first fluid input;
providing a second fluid input to the cylinder different from the first input; and
operating the cylinder in response to the second fluid input at the first speed during the second portion of the extension stroke.

17. A method of claim 16 further comprising detecting when the cylinder begins moving through the second portion of the extension stroke.

18. A method of claim 17 further comprising providing the second fluid input to the cylinder in response to detecting when the cylinder begins moving through the second portion of the extension stroke.